

What is Claimed is:

- 5 1. A method for determining at least one dimension of an object, comprising the steps of:
- (a) obtaining at least one image of the object, said at least one image including an image of at least one iris of a human being,
- (b) estimating at least one size ratio between the at least one dimension of the object and the at least one iris, by analyzing the image of the object, and
- 10 (c) approximating the at least one dimension of the object based upon the size ratio and the invariant iris diameter of human beings.
- 15 2. The method of claim 1, wherein the object is a facial feature.
3. The method of claim 1, wherein the size ratio is estimated in step (b) by determining how many pixels are arranged across the diameter of the iris as compared to how many pixels are arranged across the at least one dimension of the object to be measured.
- 20 4. The method of claim 2, wherein the object is a person's interocular distance.
5. The method of claim 4, wherein the method is used to fit eyewear for a person.
- 25 6. The method of claim 1, wherein a customer is located remotely from a merchant's premises, and wherein the iris is the customer's iris.
7. The method of claim 6, wherein the merchant makes available visual images which the customer observes on a display screen, the visual images showing

how the merchant's products would look in conjunction with an image of the customer.

8. The method of claim 7, wherein the iris is circular but appears elliptical when viewed from an angle, and wherein the invariant iris diameter is a major axis of an ellipse when the iris is viewed from said angle.

9. A method by which a merchant assists a customer who uses a display screen and an imaging device to shop for products, comprising the steps of:

- (a) receiving at least one image of the customer from the imaging device, wherein at least one of the at least one image includes an image of at least one iris of the customer,
- (b) providing the customer with a selection of products,
- (c) receiving information from the customer about a product that the customer wants to virtually try on,
- (d) providing the customer with a product image which corresponds to the product that the customer wants to virtually try on, and which is combined with the at least one image of the customer, and
- (e) determining an appropriate size of the product suitable for the customer, based upon the at least one image of the customer, wherein the appropriate size of the product is determined by using the invariant diameter of a human iris as a measuring device.

10. The method of claim 9, wherein the customer is located at a remote location from the merchant.

11. The method of claim 9, wherein the product that the customer wants to virtually try on is eyewear.

12. The method of claim 9,

wherein the circular iris appears elliptical if viewed at a nonperpendicular angle by the imaging device, so that the iris has a longest diameter which is a major axis of an ellipse, and

5 wherein the longest diameter is the invariant diameter of the human iris.

13. A method for determining at least one dimension of an object, comprising the steps of:

10 (a) obtaining at least one image of the object, said at least one image including an image of at least one iris,

(b) estimating at least one size ratio between the at least one dimension of the object and the at least one iris, by analyzing the image of the object, and

15 (c) approximating the at least one dimension of the object based upon the size ratio and the invariant iris diameter of a species.

14. A system for enabling a merchant to assist a customer who is shopping for products, comprising:

20 (a) at least one imaging device for receiving at least one image of the customer, wherein at least one of the at least one image includes an image of at least one iris of the customer,

(b) a display screen for visually providing the customer with a selection of products,

25 (c) information receiving means for receiving information from the customer about a product that the customer wants to virtually try on,

30 (d) means for generating a product image which corresponds to the product that the customer wants to virtually try on, wherein the product image is combined with the at least one image of the

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customer and wherein the product image is provided to the customer, and

(e) means for determining an appropriate size of the product suitable for the customer, based upon the at least one image of the customer,

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wherein the appropriate size of the product is determined by using the invariant diameter of a human iris as a measuring device.

15. The system of claim 15, wherein the customer is located at a remote location from the merchant.

16. The system of claim 15, wherein the product that the customer wants to virtually try on is eyewear.

15 17. The system of claim 15,
wherein the circular iris appears elliptical if viewed at a nonperpendicular angle by the imaging device, so that the iris has a longest diameter which is a major axis of an ellipse, and
wherein the longest diameter is the invariant diameter of the human
20 iris.